

Work Order ID 55638

January 26, 2010 11:19:57 AM

Page 1

Item ID: D3689-1

Accept

Revision ID:

Item Name: SLEEVE

Start Date: 1/26/2010 Start Qty: 12.00

Required Date: 2/2/2010 Req'd Qty: 12.00

Reference:

Approvals: Process Plan: UMF Date: 10-1-26 Tooling:

QC: Date: SPC (Y/N):

Cust Item ID:

Customer:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3689

Rev B

100

0.00



DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1- Turn as per Folio FA722 Rev: B & Dwg D3689 Rev: B
2-CHECK THREAD WITH GO-NO GO GAUGE DT9450 A & B
3-Deburr per dwg D3689

SA/SL 10/01/28

12

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

SA/SL 10/01/28

120

0.00



CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

Conventional Milling Machine

C'sink .188" holes as per dwg D3689

SL 10/01/29

12

12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D3689-1

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Setup Start



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Item Name: SLEEVE

Stop



Start Date: 1/26/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 2/2/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00

SL 10/01/29



QC

Memo

0.00

Quality Control

140

QC8- Inspect parts - second check

0.00

SL 10/01/29



QC

Memo

0.00

Quality Control

12 0

150

PURCHASING

0.00



Purchasing

Memo

0.00

Purchasing

Issue P/O: 11290
LPI Per ASTM 1417 LEVEL 2
Certificate of conformaty is required

PS 10-2-01

(12)

Work Order ID 55638

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

1/26/01 (12)

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

W 10 02 02 (12)

180

Identify as per dwg & Stock Location: Q2

0.00



Packaging

Memo

0.00

Packaging

1/26/03 (12)

Work Order ID 55638

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Item ID: D3689-1

Accept



Setup Start



Revision ID:

Item Name: SLEEVE

Stop



Start Date: 1/26/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 2/2/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/02/03

MF
10-02-03

Picklist Print

January 26, 2010 11:19:56 AM

Page 1

Work Order ID: 55638



Parent Item: D3689-1



Parent Item Name: SLEEVE

Start Date: 1/26/2010

Required Date: 2/2/2010

Comments: IPP Rev:A New Issue 08-02-11 JLM Verified By:EC
 IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
 IPP Rev:C Add note on material cutting JLM Verified By:JM

Start Qty: 12.00

Required Qty: 12.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last
M174PH-H900R1.375		Purchased	No		



17-4 SS H900 ROUND BAR 1.375

Route	Unit of	Qty on	Remaining	Qty	Date	Status
100	f	57.6000	6.3158			



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

57.6

110540

14

111123

30

> 112374

13.6

6.316 10/01/29

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 55638
Description: Sleeve		Part Number: D3689-1
Inspection Dwg: D3689	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.90	+/-0.030	1.95	/			
Ø0.768	+/-0.010	Ø.770	/			
Ø0.063	+0.005/-0.001	Ø.063	/			
R0.06	+/-0.030	R.06	/			
3/4-16UNF-2B	N/A		/			
0.035 x 45°	+/-0.010 x 0.5°	0.035 x 45°	/			
1.5	+/-0.030	1.490	/			
1.35	+/-0.030	1.352	/			
Ø0.188	+0.005/-0.001	Ø.190	/			
90°	0.5°	90	✓			
Ø0.250	+/-0.010	.250	✓			
Ø1.075	+0.000/-0.015	Ø1.070	/			
1.13	+/-0.030	1.125	/			
4.00	+/-0.030	4.008	/			

Measured by: SA / SL
Date: 10/01/26 / 10/01/29

Audited by: S.F.
Date: 10/02/04

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	AA

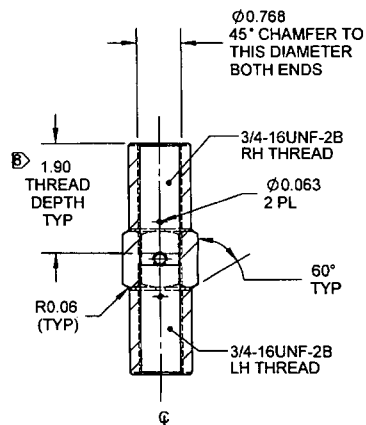
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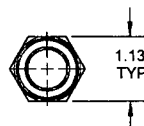
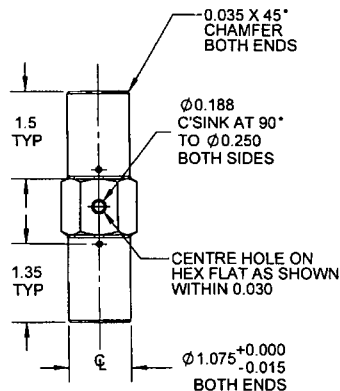
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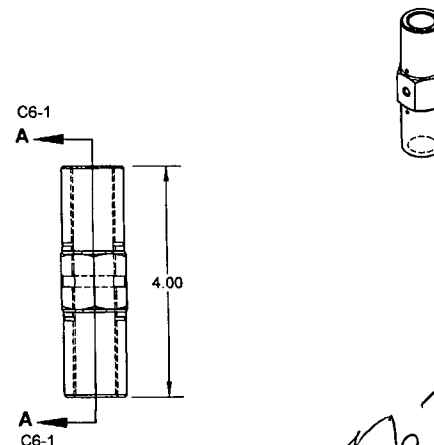
NOTE: Date & initial all entries



SECTION A-A
D3-1



D3689-1 SLEEVE



#55638

RELEASED
08/12/15

- NOTES:**
- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.67 lb
 - 8) DIMENSION SHOWN IS MINIMUM DEPTH OF FULL THREAD
 - 9) LPI PER ASTM 1417 LEVEL 2

B	CHANGE TO 17-4PH H-900 (ZN A8-1); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22
REV.		BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3689	SHEET 1 OF 1
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	SLEEVE	NTS
DATE	08.11.24	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Dart Aerospace Ltd

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LIQUID PENETRANT TEST REPORT

P- 15316

CLIENT DAT Aerospace DATE FEB 1-2010 PAGE 1 OF 1
ATTENTION LINDA ACUREN JOB No. 188-10-0650 TIME AM ☒ PM ☐
ADDRESS 1230 ABERDEEN ST. POWO No. 11090
HAWKESBURY ON. WORK LOCATION HAWKESBURY
K6H 1K7 ACCEPTANCE STD. ASTM 1417 REV./DATE 2007
PROJECT F.P.I. ON CROSS TUBES
ITEM(S) EXAMINED (12) SLEEVE'S (6)

JOB DESCRIPTION STAINLESS STEEL PROCEDURE NO. LT4002 REV./DATE LT4002 TECHNIQUE NO. LT4002 REV./DATE LT4002
PART NO. STAINLESS STEEL MATERIAL ALUMINE ALUMINUM THICKNESS ---
SCOPE WET FLUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT 100% EXTERNAL

TEST DETAILS
METHOD ☒ FLUORESCENT ☐ VISIBLE
FAMILY BRAND MAGNAFLUX
PENETRANT 2L 6F MINIMUM DWELL TIME 45 MIN. ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. ☐ BLACK LIGHT S/N 16459 ☒ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. ☐ LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY ☐ OTHER LAPRO
LIGHT METER S/N 1078866 CAL DUE DATE MAY 7, 2010

TEST SURFACE
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/20°F ☐ -4°C/20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F
RESULTS- ☐ METRIC ☐ IMPERIAL

12 SLEEVE'S - W.O. 55638 ✓
1 CROSS TUBE - W.O. 55132 ✓
1 CROSS TUBE - W.O. 55133 ✓
1 CROSS TUBE - W.O. 55406 ✓
1 CROSS TUBE - W.O. 55404 ✓
20 COLLECTIVE BELL CRANK - W.O. 53635 ✓
1 MOUNT - W.O. 55097 ✓
1 CROSS TUBE - W.O. 55433 ✓
1 CROSS TUBE - W.O. 55434 ✓

ALL ITEMS EXAMINED ON THIS
REPORT WERE FOUND ACCEPTABLE
TO THIS STANDARD.

mm 10/02/02

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES
CLIENT REPRESENTATIVE MATTHEW MURDOCH DTR # E-27697
TECHNICIAN (SIGNATURE): 6-4 SIGNATURE MATTHEW MURDOCH
NAME (PRINT): MIKE JANSTEN
CGSB LEVEL II SNT LEVEL II CGSB LEVEL --- SNT LEVEL ---
CGSB REG. NO. 6606 CGSB REG. NO. ---
REPORT REVIEWED BY: ---
NAME --- INITIALS ---

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